

The script called *Nāgarī* (lit. ‘of the city’) or *Devanāgarī* (‘divine Nagari’) is phonologically based, and is written from left to right. Historically, like other native scripts of South Asia, it derives from the Brahmi alphabet of the Ashokan inscriptions. Typologically, it is what I call an *alphasyllabary*: that is, it writes each consonant-vowel sequence as a unit, called an *akṣara*, in which the vowel symbol functions as an obligatory *diacritic* to the consonant; in the terminology of Daniels (SECTION 1), it is an *abugida*.

Devanagari is currently used for Hindi, Nepali, and Marathi, and sometimes for local languages such as Bhojpuri. It is the script generally used for printing Sanskrit in modern times (in earlier times, Sanskrit manuscripts were written in a variety of local scripts). For an overview, see Masica 1991: 133–53.

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### The symbols

The traditional order of symbols in the Indian scripts is based primarily on articulatory phonetics, as originally developed for Sanskrit by the ancient pandits. Implicit in the order is a series of phonological tables, organized in terms of articulatory features. First come the *primary* vowels, i.e. those recognized as simple vowels in Sanskrit grammar. TABLE 31.1 shows the independent or *initial* form for each vowel, followed by the diacritic or postconsonantal form, illustrated with the consonant प *p*. Phonetic values used in Sanskrit in ancient times are indicated by IPA symbols in brackets. The canonical order proceeds from each short vowel to the corresponding long vowel. The names of the letters consist of their sounds, sometimes followed by *kāra* ‘making’; thus अ is called *a* or *a-kāra*. Symbols exist for short and long syllabic laterals (लृ [l̥], लृ̄ [l̄]), but in Sanskrit the former is rare and the latter never occurs, and they are irrelevant to the modern languages.

Next come the *secondary* vowels which, in Sanskrit, represent historical (and descriptively underlying) diphthongs, again in long and short pairs. However, what were originally *ai āi* and *au āu* came to be pronounced in Sanskrit as *e* [e:] *ai* [a:i]

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TABLE 31.1: *Primary Vowels*

	SHORT		LONG	
	Initial	Diacritic	Initial	Diacritic
Unrounded low central	अ a [ʌ]	– प pa	आ ā [a:]	–। पा pā
high front	इ i [i]	ि पि pi	ई ī [i:]	ी पी pī
Rounded high back	उ u [u]	ु पु pu	ऊ ū [u:]	ू पू pū
Syllabic vibrant	ऋ ṛ [r]	ॠ ृ ṛ	ऌ ṝ [r:]	ॡ ृ̄ ṝ

TABLE 31.2: *Secondary Vowels*

	LONG		DIPHTHONGS	
	Initial	Diacritic	Initial	Diacritic
Unrounded front	े e	– के ke	े ai	ै पै kai
Rounded back	ो o	– पो po	ौ au	ौ पौ kau

and *o* [o:] *au* [a:u], respectively. TABLE 31.2 again shows the initial and diacritic forms.

Next in order come two symbols which are written only after vowels, and are normally listed in combination with *a*. In Sanskrit, they originally represented secondarily derived phonetic features. The first is a nasal feature called *anusvāra*; it is written with a dot above the *aḥsara* and is transliterated as *m̐* (e.g. अं *am̐*). In Sanskrit it may originally have been a feature of nasalization, cooccurring with the preceding vowel. However, in later usage, it is often used for a nasal consonant homorganic with a following stop; e.g., *aṅga* ‘limb of the body’ is written either with a conjunct consonant symbol, as अङ्ग, or as *aṅga*, i.e. अङ्ग. A variant form for this symbol is called *anunāsika* or *candraṅḍī* (e.g. अं *am̐*); it is used more explicitly to indicate nasalization of vowels, as in अंश *aṁśa* [ʌ̃ʃə] ‘portion’.

After *anusvāra* comes an element of voiceless breath, [h], called *visarga* and transliterated *ḥ*. It is written with two dots after the *aḥsara*, e.g. अः *aḥ* [əh]. (Note, by contrast, that the transliteration *h* represents voiced or murmured breath, [ɦ].)

Next follow the occlusive consonants, that is, the stops and nasals of Sanskrit. TABLE 31.3 shows the *independent* or *full* forms of each. (The canonical order of these and the remaining consonant symbols proceeds horizontally within each row.)

Among the nasals, velar *ṅ* and palatal *ñ* are secondarily derived in Sanskrit, and the symbols are relatively rare in the modern languages. Two letters have special variants used mainly in the Bombay area: ञ *jha* is replaced by झ, and ण *ṇa* by ण.

There follow, again arranged from the back of the mouth toward the front, the oral sonorants and the voiceless sibilants, as shown in TABLE 31.4.

TABLE 31.3: *Occlusives*

	VOICELESS PLOSIVES				VOICED PLOSIVES				NASALS	
	<i>Unaspirated</i>		<i>Aspirated</i>		<i>Unaspirated</i>		<i>Aspirated</i>			
Velar	क	k [k]	ख	kh	ग	g [g]	घ	gh	ङ	ṅ [ŋ]
Palatal	च	c [c]	छ	ch	ज	j [j]	झ	jh	ञ	ñ [ɲ]
Retroflex	ट	ṭ [ɽ]	ठ	ṭh	ड	ḍ [ɖ]	ढ	ḍh	ण	ṇ [ɳ]
Dental	त	t [t]	थ	th	द	d [d]	ध	dh	न	n [n]
Labial	प	p [p]	फ	ph	ब	b [b]	भ	bh	म	m [m]

The label *retroflex* as applied to *r* has some justification in terms of the underlying phonology of Sanskrit; however, it is phonetically an alveolar or dental vibrant. Note that combinations of *r* with *u* *ū* have special shapes: रू *ru* and रू *rū*.

Finally comes a miscellaneous category of sounds not classified in terms of articulation. In all the languages, this category contains ह *ha*, a voiced or murmured glottal fricative [h]. In Vedic Sanskrit and in Marathi, the symbol ऌ *la* [l], retroflex lateral, also occurs here.

In the modern languages, especially in Hindi, a subscript dot is used beneath certain consonants to represent additional sounds. Thus, with the addition of the dot, क *ka* becomes क *qa*, ख *kha* becomes ख *xh*, ग *ga* becomes ग *ya*, ज *ja* becomes ज *za*, ड *ḍa* becomes ड *ṛa* [ɽ], and ढ *dha* becomes ढ *ṛha*. The dot is ignored in the traditional ordering system.

In traditional writing, there was little systematic use of word space or of punctuation. The symbols | and ||, respectively, were used in verse for minor and major prosodic boundaries. Modern practice has adopted conventions of word space and punctuation which are mainly based on European practice.

The numerals are shown in TABLE 31.5.

TABLE 31.4: *Sonorants and Fricatives*

	<i>Palatal</i>		<i>Retroflex</i>		<i>Dental</i>		<i>Labial</i>	
Sonorants	य	y [j]	र	r [ɽ]	ल	l [l]	व	v [v]
Sibilants	श्च	ś [ç]	ष	ṣ [ʂ]	स	s [s]		

TABLE 31.5: *Numerals*

१	२	३	४	५	६	७	८	९	०
१	२	३	४	५	६	७	८	९	०

## Specific features

A following short vowel *a* is considered inherent in each consonant symbol; thus, unless these letters are modified by other attached symbols, प is *pa*, and र is *ra*.

Each consonant is represented by a basic consonantal symbol, e.g. प *pa*, र *ra*. Consonants in sequence share a continuous horizontal headstroke across the top, thus पर *para*. (Letters with a break in this stroke are ज *ja*, थ *tha*, ध *dha*, and भ *bha*.) When people write on lined paper, they “hang” the symbols from the line; but in rapid handwriting on unlined paper, the headstroke may be omitted altogether.

Vowels other than *a*, when they follow a consonant, are written as obligatory diacritics. Some are on top of the associated consonant, some on the bottom, some on the left side, some on the right side, and some in a combination of positions. Thus the diacritic for *ā* is  $\bar{}$  on the right-hand side, as in पा *pā*. That for *i* is  $\acute{}$ , extending from the top of the consonant to its left-hand side, as in पि *pi*. That for *u* is  $\underset{\cdot}{}$  written beneath the consonant, as in पु *pu*. That for *e* is  $\bar{}$ , written above the consonant, as in पे *pe*; and that for *o* is  $\bar{}$ , written to the right of the consonant, as in पो *po*.

A vowel not occurring after a consonant—either in initial position, i.e. after a space, or after another vowel—is written not with a diacritic, but with an independent symbol; each one is considered an *akṣara* in its own right, and has its own headstroke. Thus initial *a* is written अ, initial *ā* is आ, initial *i* is इ, and so on. (In traditional Sanskrit usage, “initial” meant “at the beginning of a sentence or line of verse.” In modern usage, it usually means “at the beginning of a word,” with conventionally established word boundaries which reflect European practice.)

A consonant not occurring before a vowel—typically one in final position, i.e. before a space rather than before a vowel—is written with a subscript diagonal stroke which may be labeled *zero vowel*; in other words, it “kills” the vowel. The symbol is called *virāma*; a consonant so affected is called *halanta* (Lambert 1953: 15–16). Thus a final symbol प would be interpreted as *pa*; but with the added diacritic, प corresponds to *p*.

Consonants may also occur in clusters, especially in Sanskrit and in words which the modern languages have borrowed from Sanskrit; these may involve both initial and medial sequences of two or three consonants, e.g. *ty*, *pr*, *kv*, *st*, *kṣ*, *str*, *kṣm*. In such cases, *conjunct* symbols are used to show that only the last consonant of the sequence is followed by a vowel. In traditional usage, most such compounds are formed by reducing consonant symbols other than the last one in the sequence to an abbreviated form, typically lacking the characteristic long vertical stroke on the right-hand side. These reduced forms, sometimes called *half* consonants, are written to the left of the final symbol. For example, प *p(a)* plus य *ya* combine as प्य *pya*; त *t(a)* plus क *ka* combine as त्क *tka*.

Some compound letters are combined not horizontally, as above, but vertically. This is especially common when the first symbol does not have a long vertical stroke,

such as  $\bar{d}$  *da* and  $\bar{h}$  *ha*. In such combinations, the second symbol is attached in modified form beneath the first symbol; thus  $\bar{d}$  *d(a)* plus  $\bar{v}$  *va* combine as  $\bar{d}$  *dva*, and  $\bar{h}$  *h(a)* plus  $\bar{y}$  *ya* as  $\bar{h}$  *hya*. Some symbols are found in both horizontal and vertical arrangements, e.g. *jja* as either  $\bar{j}$  or  $\bar{j}$ .

Compounds in which one element is  $\bar{r}$  *r(a)* are handled in special ways. As the first element in a cluster, *r* is written with  $\bar{r}$  (called *repha*) above the consonant which follows it; thus  $\bar{r}$  *r* +  $\bar{p}$  *pa* gives  $\bar{r}$  *rpa*. As the second element in a cluster, *ra* is written with  $\bar{r}$  at the foot of the consonant which precedes it; thus  $\bar{p}$  *p(a)* +  $\bar{r}$  *ra* gives  $\bar{p}$  *pra*.

A few consonant sequences correspond to special conjunct symbols which are less analyzable; the commonest are as follows:

क	k	+	ष	ṣa	=	क्ष	kṣa
ज	j	+	ञ	ña	=	ज्ञ	jña
त	t	+	त	ta	=	त्त	tta
त	t	+	र	ra	=	त्र	tra

These conjuncts may themselves occur in “half” forms when they are followed by yet another consonant; thus  $\bar{t}$  *tt(a)* +  $\bar{v}$  *va* gives  $\bar{t}$  *tva*, and  $\bar{k}$  *kṣ(a)* +  $\bar{m}$  *ma* gives  $\bar{k}$  *kṣma*. (Some typewriters lack many of the special conjunct symbols; as a make-shift, a cluster like *tta* is then written with a “half” *t*, as  $\bar{t}$ .)

Note that, where conjunct consonants are involved, the *akṣara* does not actually correspond to a spoken syllable: thus the word *sarva* ‘all’ would be syllabified as *sar* + *va* in pronunciation, but it is written with the two *akṣaras*  $\bar{s}$  *sa* +  $\bar{v}$  *rva*.

## Correspondences

Correspondences of written symbols to spoken sounds, in the case of Sanskrit, are much as indicated by the descriptive labels and the transcriptions used above. Correspondences to the spoken sounds of the modern languages follow the lead of Sanskrit in many respects. The principal departures are as follows:

In all the modern languages, short *a* is normally not pronounced at the end of a word, or intervocally in the environment VC\_\_VC. Thus  $\bar{d}$  *दास*, in Sanskrit *dāsa* ‘servant’, is pronounced [da:s] in the modern languages; and  $\bar{u}$  *उपदेश*, in Sanskrit *upa-deśa* ‘instruction’, is pronounced [upde:ṣ].

In both Marathi and Nepali, there is no distinction in pronunciation between etymological “short”  $\bar{i}$  *i* and “long”  $\bar{ī}$  *ī*, or between “short”  $\bar{u}$  *u* and “long”  $\bar{ū}$  *ū*. Among the low vowels, however, a qualitative distinction exists: “short”  $\bar{a}$  *a* is pronounced [ə], while “long”  $\bar{ā}$  *ā* is [a].

In the modern languages,  $\bar{r}$  *r*,  $\bar{l}$  *l*, and  $\bar{l}$  *l* are pronounced as if they were *ri*, *rī*, and *li*, respectively.

In many varieties of Hindi, the diphthongs  $\bar{e}$  *ai* and  $\bar{ā}$  *au* have come to be pronounced as monophthongs [æ: ə:].

In Hindi, the *anusvāra* अँ is used mainly to write homorganic nasals before stops, as in अँग *ang* [əŋg] ‘limb’. Before fricatives, many speakers pronounce it as [n], as in अंश *aṃś* [ənʃ] ‘portion’. The related *anunāsika* अँ is used consistently to write nasalization of vowels, as in हाँ *hāṃ* [hã:] ‘yes’. In Marathi, the *anusvāra* is again used to write homorganic nasals before stops; before fricatives, it is pronounced as [ṽ], as in अंश *aṃś* [əṽʃ] ‘portion’. In still other positions, it has mainly historical significance and is not pronounced as such.

What were originally palatal stops are in general pronounced as affricates in modern times; e.g., च *c* and ज *j* become [tʃ] and [dʒ] respectively. In Marathi, च *c*, ज *j*, and झ *jh* are pronounced as palatal affricates when followed by front vowels, and also in loanwords; but they are pronounced as [ts dz dzʰ] before back vowels in native words.

In Hindi, ज्ञ *jñ* is pronounced [gʃ] with a following nasalized vowel; in Marathi, it is pronounced [ʃñ].

In Nepali, व *v* usually merges in pronunciation with ब *b*.

The sibilants श *ś* and ष *ṣ* are not usually distinguished in the pronunciation of the modern languages; both are pronounced as an alveo-palatal sibilant [ʃ]. In Nepali, they are further merged with स *s*.

## Relations to other scripts

It should be noted that, inasmuch as Hindi and Urdu are virtually the same language on the colloquial level, much Hindi material which is written in Devanagari is interconvertible with Urdu material written in Perso-Arabic script (SECTION 62). With the adaptations to Devanagari letters which have been made to represent borrowed sounds of Perso-Arabic origin, it is possible for writing in Devanagari and in Urdu script to correspond to the same spoken text.

Proposals have been made in India to replace Devanagari script with Roman script, for modern languages such as Hindi. At present there seems little chance that such a change will ever be implemented. The use of Devanagari is increasing continually, with the spread of education, and it has been adapted to tribal languages in North India. Thus efforts to encourage literacy in Gondi, a Dravidian language spoken in Maharashtra State, have used the Devanagari script—appropriately, since Marathi is the dominant language of the area.

### SAMPLE OF SANSKRIT

1. <i>Devanagari:</i>	नैनं	छिन्दन्ति	शस्त्राणि	नैनं	दहति	पावकः ।
2. <i>Transliteration:</i>	nainam	chindanti	śastraṇi	nainam	dahati	pāvakaḥ
3. <i>Transcription:</i>	nainə	cʰindənti	ɕəstrə:ɳi	nainə	dəɦəti	pa:vəkəh
4. <i>Gloss:</i>	not.this	they.cut	weapons	not.this	it.burns	fire

1. न चैनं क्लेदयन्त्यापो न शोषयति मारुतः ॥
2. na cainam kledayantyāpo na śoṣayati mārutaḥ
3. nə cainə kle:dəyəntja:po: nə ɕo:ʃəjəti ma:ru:təḥ
4. not and.this they.moisten.waters not it.dries wind

1. अच्छेद्यो ऽयमदाहो ऽयमक्लेद्यो ऽशोष्य एव च ।
2. acchedyo 'yam adāhyo 'yam akledyo 'śoṣya eva ca
3. əcʰe:dyo: jəm əda:fiyo: jəm əkle:dyo: ə:ʃjə e:və ɕə
4. uncuttable this unburnable this unwettable undryable just and

1. नित्यः सर्वगतः स्थाणुरचलो ऽयं सनातनः ॥
2. nityaḥ sarvagataḥ sthāṇur acalo 'yam sanātanaḥ
3. nitjəḥ sərʋəgətəḥ stʰa:ṇur əcəlo jə səna:tənəḥ
4. eternal all.pervading fixed immovable this primeval

'Weapons do not cut it [the soul], fire does not burn it.

Waters do not wet it, wind does not dry it.

It cannot be cut, or burned, or wetted, and cannot be dried.

It is eternal, all-pervading, fixed, immovable, primeval.'

—Bhagavadgītā 2:23.

### Bibliography

- Kellogg, S. H. 1938. *A Grammar of the Hindi Language*, 3rd ed. London: Routledge & Kegan Paul.  
 Lambert, Hester M. 1953. *Introduction to the Devanagari Script*. London: Oxford University Press.  
 Masica, Colin P. 1991. *The Indo-Aryan Languages*. Cambridge: Cambridge University Press.  
 Whitney, William Dwight. 1889. *Sanskrit Grammar*. Cambridge: Harvard University Press.